

-- 63. A process for the synthesis of polyol fatty-acid polyesters by reacting a polyol and a fatty-acid lower-alkyl ester under substantially solvent free conditions in the presence of a catalyst and an emulsifier, the process comprising

an initial reaction stage which is carried out under such conditions that the reaction mixture in said initial stage is in steady-state, with continuous introduction of reactants comprising polyol and fatty-acid lower-alkyl ester, and continuous removal of products comprising reaction mixture having a degree of esterification of about 10% or more and volatile alcohol formed during the initial reaction stage, and

one or more subsequent reaction stages in which the reaction mixture from said initial stage is further reacted to said polyol fatty-acid polyesters. --

D' -- 64. The process according to Claim 63 wherein the reaction mixture from the initial stage is further reacted to said polyol fatty acid polyesters after combining with any remaining part of the fatty-acid lower-alkyl ester reactant. --

-- 65. A process according to Claim 63 wherein the emulsifier is an alkali metal soap. --

-- 66. A process according to Claim 63 wherein the alkali metal soap is selected from the group of soaps having a chain length within the range of from 8 to 22 carbon atoms. --

-- 67. A process according to Claim 63 wherein the fatty-acid lower-alkyl ester is a fatty-acid methyl ester. --

-- 68. A process according to Claim 63 wherein the catalyst is selected from the group consisting of potassium hydroxide and carbonates of potassium and sodium. --

-- 69. A process according to Claim 63 wherein the reaction mixture in said initial reaction stage has a degree of esterification of within the range of from 10 to 60%. --

-- 70. A process according to Claim 63 wherein the reaction mixture in said initial stage does not contain any substantial amount of solvent. --

-- 71. A process according to Claim 63 wherein the reaction temperature in said initial stage is maintained at a level of within the range of from 130° to 140°C. --

-- 72. A process according to Claim 63 wherein the average residence time of the reaction mixture in said initial stage is caused to be about 1.5 hours. --

D -- 73. A process according to Claim 63 wherein the molar ratio of catalyst to polyol in said initial reaction stage is within the range of from about 0.01:1 to about 0.5:1. --

-- 74. A process according to Claim 63 wherein the molar ratio of emulsifier to polyol in said initial reaction stage is within the range of from 0.2:1 to 0.6:1. --

-- 75. A process according to Claim 63 for the synthesis of polyol fatty-acid polyesters having a degree of esterification of at least about 70%. --

-- 76. A process according to Claim 63 wherein the polyol is sucrose. --

-- 77. A process according to Claim 76 wherein the molar ratio of fatty-acid lower-alkyl ester to sucrose is within the range of from 7.2:1 to 15:1. --

-- 78. A process according to Claim 63 wherein said initial reaction stage is fully separate from said one or more subsequent reaction stages. --